I. Objection to specification

The specification stands objected to for containing informalities. Applicant has amended the specification herein to correct the informalities. Additionally, the specification stands objected to for failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner states that the term "surface light source" is not mentioned in the specification. However, Applicant submits that, on page 112, lines 9-14, the specification describes surface area coverage of the stimulating light source. Although the claim terminology is not identical, Applicant would remind the Examiner that "[t]he mere fact that a term or phrase used in the claim has no antecedent basis in the specification disclosure does not mean, necessarily, that the term or phrase is indefinite. There is no requirement that the words in the claim must match those used in the specification disclosure. Applicants are given a great deal of latitude in how they choose to define their invention so long as the terms and phrases used define the invention with a reasonable degree of clarity and precision." See MPEP §2173.05(e). Additionally, this term is used in the originally filed claims. Original claims constitute their own description. *In re Koller*, 613 F.2d 819, 204 USPQ 702 (CCPA 1980); MPEP §2163.03. As such, this term is in fact considered to be its own description. Therefore, since the claim terminology does not have to appear identically in the specification to satisfy the requirement for proper antecedent basis, Applicant requests that the objection be reconsidered and withdrawn.

II. Claim Rejections under 35 U.S.C. § 103

Claims 60 and 126 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Saotome (USP 5,038,037) in view of Nakamura et al. (USP 5,427,858, hereinafter "Nakamura"). Claims 66 and 132 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Saotome

in view of Nakamura and Gilblom et al. (USP 5,747,825, hereinafter "Gilblom"). Applicant traverses the rejections for at least the reasons discussed below.

Applicant's invention relates to a method and apparatus for efficiently reading out images stored in a stimulable phosphor sheet. As shown in FIGS. 44 and 45, for example, a stimulable phosphor sheet 50 is disposed on a scanning belt 40 for moving the sheet 50 to provide relative movement between the light source 11 and the phosphor sheet 50. A light source 11 emits light onto an area of the sheet 50, thereby causing light to be emitted from the sheet 50. A line sensor 20 receives and photoelectrically converts the emitted light from the sheet. In an exemplary embodiment, the light source comprises an organic EL device.

Saotome relates to a stimulable phosphor sheet read out apparatus that permits efficient subtraction processing of multiple images. Two independent image read-out sections are provided to read the images recorded on separate sheets. Several alternative embodiments are described. Referring to Fig. 1, a first phosphor sheet 26A is disposed on one side of a flexible belt 26, and a second phosphor sheet 26B is disposed on a second side of the flexible belt. Two light sources 51, 51' are disposed on one side of the belt-phosphor medium. The belt and phosphor sheets are wound around shafts 22, 23. During image recording, radiation 35 passes through the first stimulable phosphor layer 26A and flexible belt 26 and is irradiated on the second stimulable phosphor layer 26B. The radiation belt converts radiation energy, thereby providing different recording conditions on the first and second layers that are appropriate for subtraction processing. During image read out from the phosphor, the first and second phosphor sheets are read independently by respective read-out apparatus. The optical paths of the stimulating light source, indicated by solid lines passing through lenses and mirrors 58, 59, 59B,

59C (for example) do not overlap with the path of the emitted light from the surface of the phosphor sheet to the photodetector 54. An optical waveguide 55 guides emitted light to a detector 54. It is noted that when phosphorescent material emits light at the boundary of the UV range (e.g. 400 nm), a waveguide converts the emitted energy to 500 nm, outside of the typical UV range. See col. 23, lines 57-69. Referring to the embodiment of Fig. 11, first read out device 620 and second read out device 620' are disposed on either side of a phosphor laminated sheet, including phosphor sheets 402B, 402B' and a radiation conversion layer 405. In this embodiment the phosphor sheets remain stationary, and the readout devices are conveyed in a reciprocating fashion on guide rails. See Fig. 7, element 440. The light paths of the stimulating rays 621 do not overlap with the emitted light.

Nakamura relates generally to organic electroluminescence (EL) devices.

Gilblom relates generally to an x-ray imager with a TDI camera for imaging large areas of a stimulable phosphor plate.

The Examiner asserts that Saotome discloses all of the limitations of claims 60 and 126, except for the use of an organic EL device as the line light source, which the Examiner acknowledges is not taught by Saotome. The Examiner further asserts that Nakamura discloses an organic EL device and that it would have been obvious to employ the organic EL device of Nakamura in the apparatus of Saotome.

To establish a *prima facie* case of obviousness the Examiner must show that there is some suggestion or motivation, in either the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. See MPEP § 2143. If there is no teaching, suggestion, or motivation, either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art, then there is no suggestion or motivation to modify the references to achieve the claimed limitations of the present invention, and the Examiner is engaging in impermissible hindsight in stating that the claims are obvious over the applied prior art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and MPEP §2143.01.

Applicant submits that there is no suggestion or motivation in the prior art to combine the teachings of Nakamura with Saotome, and that the Examiner is engaging in improper hindsight reason to support the rejection. The Examiner admits that Saotome does not teach a line light source that is constituted of an organic EL device. Although the Examiner points to Nakamura as disclosing organic EL devices, nothing in the prior art offers a suggestion or motivation to modify the apparatus of Saotome to include an organic EL device as a line light source. Moreover, as noted at column 1, lines 45-46, of Nakamura, "studies thereof for practical use are under way at present," thereby indicating a lack of a suggestion of a particular application for the organic EL devices. Since the only such suggestion appears in the disclosure of the present invention, the Examiner must be engaging in improper hindsight reasoning. Thus, Applicant submits that claims 60 and 126 are patentable for these reasons.

The rejection of claims 66 and 132 suffers from the same deficiencies noted above with respect to claims 60 and 126. More specifically, the Examiner's reliance on prior art does not teach or suggest the claimed scanning means. Also, the prior art fails to teach or suggest a surface light source constituted of an organic EL device in the apparatus and method claimed in the present invention. Although Nakamura mentions a surface light source as an example of an

organic EL device (col. 3, line 25), there is no teaching or suggestion in the prior art of combining the organic EL device of Nakamura with the apparatus of Saotome. In fact, the Examiner does not even assert that Saotome teaches or suggests the use of a surface light source. Furthermore, since Gilblom fails to make up for the aforementioned deficiencies, claims 66 and 132 are believed to be allowable over the prior art for at least these reasons.

Further, Applicant submits that there are many advantageous effects of the present invention obtained from using the organic EL as the light source for reading out the stimulable phosphor sheet, which cannot be obtained from the combination of the cited references. For example, the stimulable phosphor sheet is subject to a phenomenon called "fading" which indicates naturally losing the information (latent image corresponding to the irradiated radiation energy) recorded in the stimulable phosphor sheet as time passes. When the temperature is higher, the fading can be reduced, since the heating value of the organic EL is quite small compared with the conventional fluorescent lamp or LED array used for a light line source. Another advantageous effect is that the line width (width in the direction perpendicular to the longitudinal direction of the line) of the light to be output can be kept as small as possible while high luminance can be maintained in the organic EL, compared with the conventional fluorescent lamp or LED array used for a light line source. Therefore, the organic EL has an advantageous effect in that the stimulable phosphor sheet can be read out with high resolution while the sheet can be read out with high efficiency.

Based on the foregoing remarks, Applicant requests that the rejection of claims 60, 66, 126 and 132 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

III. Newly added claims

Applicant adds herein new claims 133-152 to more fully define the present invention.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,

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Date: April 4, 2002

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

In the paragraph bridging pages 232-233, please substitute the following:

As described above, with this embodiment of the eleventh radiation image read-out apparatus in accordance with the present invention, the subtraction image signal Sproc can be obtained easily from the image signals SL and SH having been detected from the front and back surfaces of the [350] 390.

IN THE CLAIMS:

Claims 133-152 are added as new claims.